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This poster is released to inform interested parties of ongoing research and to encourage discussion.

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The Earnings Gap Between Men and Women Persists

- In 2000, the female-to-male earnings ratio among full-time, year-round workers ages 25 and older was 0.66
- The gap has narrowed from 0.63 in 1990 and 0.58 in 1980
- Though women's educational attainment has increased sharply over the past 25 years, the earnings gap remains

Earnings Gap by Occupation and Education

- 1. Do women in occupations with higher educational attainment realize wages more equal to men's?
- 2. Do occupations dominated by women pay women and men more equally?
- 3. Do majority female occupations pay lower wages?
- 4. How do earnings ratios within occupations vary by age and education?
- 5. What occupations pay more equally?

Census 2000 Long Form



- No Distributed to 1 in 6 housing units ■
- Collected data from a national sample of nearly 45.5 million individuals, weighted to represent the total US population in 2000 of 281 million
- Included questions on educational attainment, occupation, and earnings
- Provides the largest sample ever available for analysis of occupation and education

Educational Attainment



Responses collapsed from 16 to 8 educational attainment levels:

- Less than high school graduate
- High school graduate or GED equivalent
- Some college
- Associate degree
- Rachelor's degree
- Naster's degree
- Professional degree
- Noctorate degree

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thi If c	nat is the highest degree or level of school s person has COMPLETED? Mark (X) ONE box. urrently enrolled, mark the previous grade or highest gree received.
00000	No schooling completed Nursery school to 4th grade 5th grade or 6th grade 7th grade or 8th grade 9th grade
	10th grade 11th grade 12th grade, NO DIPLOMA
	HIGH SCHOOL GRADUATE — high school DIPLOMA or the equivalent (for example: GED) Some college credit, but less than 1 year 1 or more years of college, no degree
	Associate degree (for example: AA, AS) Bachelor's degree (for example: BA, AB, BS) Master's degree (for example: MA, MS, MEng, MEd,
0	MSW, MBA) Professional degree (for example: MD, DDS, DVM, LLB, JD) Doctorate degree (for example: PhD, EdD)
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Occupation



- Questions asked of people15 years and over who hadworked in the past 5 years
- This analysis classified responses into 96 groups, based on the Standard Occupational Classification (SOC) Manual: 2000

28	Occupation										
	a. What kind of work was this person doing? (For example: registered nurse, personnel manager, supervisor of order department, auto mechanic, accounta.										
	b. What were this person's most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, repairing automobiles, reconciling financial records)										

Earnings

Earnings defined as the sum of wages, salary income, and net income from self employment

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INCOME IN 1999 — Mark (X) the "Yes" box for each income source received during 1999 and enter the total amount received during 1999 to a maximum of \$999,999 Mark (X) the "No" box if the income source was not received. If net income was a loss, enter the amount and mark (X) the "Loss" box next to the dollar amount.
For income received jointly, report, if possible, the appropriate share for each person; otherwise, report the whole amount for only one person and mark (X) the "No" box for the other person. If exact amount is not known, please give best estimate.
 a. Wages, salary, commissions, bonuses, or tips from all jobs — Report amount before deductions for taxes, bonds, dues, or other items.
Yes Annual amount — Dollars
\$
☐ No
b. Self-employment income from own nonfarm businesses or farm businesses, including proprietorships and partnerships — Report NET income after business expenses.
Yes Annual amount — Dollars
\$ Loss
□ No

Female-to-Male Earnings Ratios



Female-to-male earnings ratio

Average earnings for females

Average earnings for males

- A large earnings gap will move ratios down toward 0.0
- A small earnings gap will produce ratios very close to 1.0

Analysis



- Sample consists of people ages 25 and over, employed full-time, year-round, with earnings.
 - 12.4 million records, weighted to 81 million
- Average 1999 earnings were derived, and female-to-male earnings ratios were calculated for:
 - 8 unique educational attainment categories
 - 96 occupational categories
 - 4 age groups
 - 2 sex groups
- Categories containing less than 50 sample cases were not included in analysis

Female-to-Male Earnings Ratio by Educational Attainment



		Average earnings in 1999 (dollars)				
Educational attainment	Female-to-male					
level	earnings ratio	Total	Men	Women		
All levels	0.66	44,528	51,504	34,185		
Less than high school grad	0.71	27,845	30,770	21,939		
High school graduate	0.69	33,043	37,808	26,065		
Some college	0.69	39,222	45,359	31,177		
Associate	0.73	40,505	46,433	33,744		
Bachelor's	0.66	58,265	67,451	44,199		
Master's	0.64	69,878	81,736	52,576		
Professional	0.57	107,050	123,102	69,675		
Doctorate	0.71	81,372	88,048	62,792		

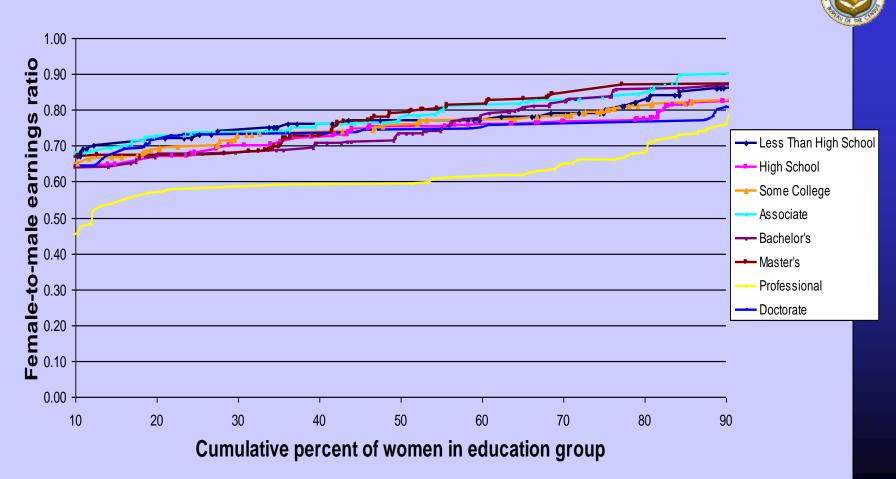
Source: U.S. Census Bureau, Census 2000, Unpublished tabulations

1. Do women in occupations with higher educational attainment realize wages more equal to men's?

No

- At every educational attainment level, less than 1% of women work in occupations where the average earnings of women approximately equals the average earnings of their male counterparts
- Majority of women work in occupations with earnings ratios that fall into a similar range, regardless of their educational attainment
 - With the exception of the professional degree attainment level, the distribution of women across earnings ratios shows a consistent pattern for all educational attainment levels

Distribution of Women in Educational Attainment Categories by Occupational Female-to-Male Earnings Ratios



Source: U.S. Census Bureau, Census 2000, Unpublished tabulations

Female-to-Male Earnings Ratios for Occupations by Educational Attainment

- Table contains occupational female-to-male earnings ratios
- For each educational attainment level, occupations were ranked from lowest to highest female-to-male earnings ratio
- With the exception of professional degrees, the earnings ratios are very similar across education levels

Occupational Female-to-Male Earnings Ratios							
Individual's educational	Cumula	Cumulative percent of women					
attainment	10 percent	50 percent	90 percent	90%-10%			
Less than high school graduate	0.67	0.77	0.87	0.20			
High school graduate	0.65	0.75	0.83	0.18			
Some college	0.65	0.75	0.83	0.18			
Associate	0.68	0.78	0.91	0.23			
Bachelor's	0.64	0.73	0.87	0.23			
Master's	0.67	0.80	0.87	0.20			
Professional	0.46	0.60	0.79	0.33			
Doctorate	0.81	0.16					
Source: U.S. Census Bureau, Census 2000, Unpublished tabulations							

2. Do occupations dominated by women pay women and men more equally?

No

- There is little correlation between the percent of women in an occupation and the earnings ratio of that occupation
- This is true for every educational level

3. Do majority-female occupations pay lower wages?

Generally, Yes

- At each educational attainment level, occupations with lower percentages of women tend to have higher absolute earnings
- Concentrations of low-paying occupations employing a high proportion of women are most noticeable for advanced degree levels
- At lower education levels, there is an enclave of medium to high paying all-male occupations. This grouping disappears at higher education levels

4. How do earnings ratios within occupations vary by age and education?

- Across most occupational groups, femaleto-male earnings ratios differ by age
 - Younger men and women seem to have more similar earnings than older men and women
 - Across age, the largest differences in earnings ratios appear for the bachelor's and professional levels

5. What occupations pay more equally?



- Occupational categories that pay equally for men and women (earnings ratio 0.95-1.05) exist at all educational levels below professional degrees
 - The average pay of these occupations is \$34,000
- Occupational categories that pay least equally for men and women (earnings ratio below 0.60) are concentrated primarily at the professional level
 - The average pay of these occupations is \$77,000

Occupations with Smallest Differences in Women's and Men's Earnings

		Mean earnings					
		(doll	ars)			Population	
				Female-to-			
	Educational			male	Percent		
	attainment			earnings	female in		
Occupation	level	Women	Men	ratio	occupation	Women	Men
Other protective service, incl. supervisors	LT HS	25,363	24,096	1.05	22.0	14,609	51,899
Other construction workers & helpers	LT HS	29,417	29,104	1.01	3.3	1,489	43,240
Supervisors, construction & extraction workers	LT HS	39,420	41,213	0.96	2.0	2,393	117,605
Armed forces	HS grad	29,870	30,365	0.98	5.9	2,185	34,599
Transportation, tourism, & lodging attendants	HS grad	28,570	29,425	0.97	41.5	8,658	12,219
Transportation, tourism, & lodging attendants	Some coll	31,616	30,976	1.02	54.2	16,146	13,621
Armed forces	Some coll	29,216	30,904	0.95	8.8	6,596	68,583
Other material moving workers, except laborers	Associate	36,612	36,273	1.01	9.1	1,554	15,548
Occupational & physical therapist assistants	Bachelor's	31,959	30,718	1.04	64.1	2,806	1,572
Transportation, tourism, & lodging attendants	Bachelor's	35,748	36,814	0.97	63.3	13,251	7,694
Waiters, waitresses	Master's	26,998	26,850	1.01	53.0	1,828	1,618
Electrical equipment mechanics, incl. supv	Master's	52,889	54,446	0.97	12.3	2,836	20,314
Source: U.S. Census Bureau, Census 2000, Unpu	ıblished tabula	itions					

Occupations with Largest Differences in Women's and Men's Earnings

	Mean earnings						
		(dollars)				Popul	ation
				Female-to-			
	Educational			male	Percent		
	attainment			earnings	female in		
Occupation	level	Women	Men	ratio	occupation	Women	Mei
Other teachers & instructors, educ & library occup	HS grad	18,573	32,645	0.57	80.6	76,809	18,46
Other teachers & instructors, educ & library occup	Some coll	20,354	36,461	0.56	69.4	73,512	32,44
Other personal care & supervisor, except child care	Professional	27,233	66,644	0.41	54.4	1,828	1,53
Health technologists & technicians	Professional	35,245	78,482	0.45	78.1	26,465	7,41
Nursing, psychiatric, & home health aides	Professional	39,670	88,217	0.45	53.4	5,016	4,37
Secretaries, administrative assistants	Professional	32,111	70,383	0.46	81.0	4,790	1,12
Sales reps, services, wholesale & manufacturing	Professional	62,470	129,980	0.48	23.1	4,741	15,79
Financial managers	Professional	77,047	145,170	0.53	28.0	3,666	9,43
Other healthcare support occupations	Professional	29,259	54,290	0.54	69.4	5,317	2,33
Other office & admin support, incl. supervisors	Professional	39,941	71,860	0.56	48.6	8,116	8,57
Accountants, auditors	Professional	53,602	94,329	0.57	28.6	8,182	20,43
Top executives	Professional	95,210	166,640	0.57	15.2	6,040	33,75
Other financial specialists	Professional	77,912	134,852	0.58	21.2	3,491	12,99
Other health diagnosing and technical occup	Professional	65,715	111,129	0.59	24.2	51,855	162,20
Physicians, surgeons	Doctorate	87,048	147,912	0.59	22.3	10,148	35,31

Professional Degrees



- ▶ Professional degree level has the most unequal earnings of all educational levels
- Examining occupations within this educational level points to data issues with possible misinterpretation of what is a professional degree
- When evaluating estimate of earnings ratio for this education level, consider two categories that clearly fall into the professional category and form the largest groups
 - Lawyers (496,000), earnings ratio = 0.66
 - Physicians, surgeons (363,000), earnings ratio = 0.62
 - Both ratios are higher than the average for the category, 0.57

Summary



- The earnings gap between men and women still exists in most occupations, even accounting for differences in educational attainment
- Women in occupations with higher educational attainment do NOT realize wages more equal to men's than women in occupations requiring less education
- NOT pay women and men more equally

Summary (cont.)



- For the most part, majority-female occupations DO pay lower wages
- - Younger men and women have closer earnings
 - Older men and women have larger earnings differences
- The occupations that pay men and women most equally tend to be relatively low-paying,
 - while the occupations that pay men and women least equally are relatively high-paying